

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1, 4, 14, 20, 23, and 27, as follows:

Listing of Claims:

1. (Currently amended) ~~A computer-readable medium having processor-executable instructions, which when executed by a processor, perform a method for over-sampling calculating values for pixels of a graphics an image, comprising:~~

calculating in anti-aliasing circuitry less than three sample values for each pixels of the an image in accordance with a respective sampling pattern ~~for each pixel, the sampling pattern for consecutive pixels alternating between a first and a second sampling pattern, each of the first sampling pattern and the second sampling pattern defining one or more sampling locations, each sampling location having a corresponding at which sample values are calculated, and the second sampling pattern corresponding corresponds to the first sampling pattern rotated 90 degrees, and the sampling locations being relative to a pixel;~~

determining in the anti-aliasing circuitry a respective value for each pixel of the image at least one pixel by combining all the sample values ealeulated for the sampling locations for the pixel, every sampling location of the sampling pattern for the pixel having a corresponding sample value for the combination; and

producing in the anti-aliasing circuitry ~~the values for the at least one pixels of the image to be saved as graphics data for the image to provide an anti-aliasing effect on the display device.~~

2. (Original) The method of claim 1 wherein each sampling pattern defines two sample locations and calculating sample values comprises calculating a pair of sample values whenever sample values for a pixel are calculated in accordance with the first or second sampling pattern, the sampling patterns alternating from one pixel to the next.

3. (Previously Presented) The method of claim 2 wherein the pixels of the image are arranged along rows and columns parallel to first and second perpendicular axes, respectively, and the less than three sample locations per sampling pattern for at least two pixels are arranged along a line parallel to neither axis.

4. (Currently amended) The method of claim 2 wherein calculating less than three sample values comprises calculating two sample values at sample positions arranged according to either the a-first or second sampling pattern, the first sampling pattern having sample positions on opposite sides of a line parallel to a first axis and dividing a respective pixel region in two, and the second sampling pattern having sample positions on opposite sides of a line parallel to a second axis and dividing a respective pixel region in two, the second axis perpendicular to the first axis.

5. (Original) The method of claim 4 wherein the two lines parallel to the respective axes pass through the centers of respective pixels.

6. (Original) The method of claim 5 wherein each sampling pattern has a sample position on each side of both of two lines parallel to respective axes and passing through the center of respective pixels.

7-13. (Cancelled)

14. (Currently amended) ~~A computer-readable medium having processor-executable instructions, which when executed by a processor, perform a method for generating an image having pixels arranged in rows and columns parallel to first and second perpendicular axes, respectively, the method comprising:~~

calculating in anti-aliasing circuitry two sample values per pixel of the image in accordance with a respective one of a plurality of sampling patterns, one sampling pattern per pixel, one pair of sampling positions points per sampling pattern and each sample position having a corresponding calculated sample value calculated, a first sampling pattern defines two

sample positions symmetrically located relative to a center of a given pixel on opposite sides of a line parallel to a first axis of the image and dividing the respective pixel in half, and a second sampling pattern defines two sample positions symmetrically located relative to a center of a given pixel on opposite sides of a line parallel to a second axis of the image and dividing the respective pixel in half, the second sampling pattern substantially corresponding to the first sampling pattern rotated 90 degrees;

calculating in the anti-aliasing circuitry a respective value for each at least one pixel of the image from the two sample values for the pixel, each sample position of the sampling pattern for the pixel having a corresponding sample value for the calculation a respective pair or pairs of calculated sample values; and

storing in a memory the calculated values for the at least one pixels to be for used for providing as graphics data for an anti-aliased the image to be displayed on a display device.

15-19. (Cancelled)

20. (Currently amended) The method of claim 14 wherein all sampling patterns are considered as dividing the regions of respective pixels into a the same four-by-four array of sub-regions, and four potential sample positions are arranged within the array in a manner whereby no two potential sample positions are located in the same row, column, or diagonal of sub-regions, each of the the plurality of sampling patterns comprising first and second sampling patterns, each defining two sampling positions from the four potential sampling positions, the first sampling pattern having sample positions locations in the first and fourth rows of the array and the second sampling pattern having sample positions locations in the second and third rows of the array.

21. (Original) The method of claim 14 wherein the sampling patterns alternate per pixel along at least one row or column of pixels.

22. (Cancelled)

23. (Currently amended) ~~A computer-readable medium having processor-executable instructions, which when executed by a processor, perform a method~~ for calculating values for pixels of an image having the pixels arranged in rows and columns parallel to first and second perpendicular axes, respectively, the method comprising:

calculating in anti-aliasing circuitry sample values for pixels of the image in accordance with a plurality of sampling rates, a sampling rate defined by the number of samples per pixel and at least one sample per pixel, each sample having a corresponding sample value calculated, the sampling rate differing for at least two pixels of the image and alternating per pixel for consecutive pixels along lines parallel to one or the other axes of the image for at least some of the horizontal or vertical lines of pixels of the image, the at least two pixels having the differing sampling rates belonging to a sampling rate set, ~~and the sampling rate set repeated for the pixels along the horizontal or vertical lines;~~

calculating in the anti-aliasing circuitry a respective values for each pixels of the image from all the respective calculated sample values for the pixel, every sample per pixel having a corresponding sample value for the calculation; and

storing in a memory the values for the pixels as graphics data to be used for providing an anti-aliased image for the image to be displayed on a display device.

24. (Cancelled)

25. (Original) The method of claim 23 wherein the sampling rate is constant for the pixels arranged along any given line parallel to the first axis and varies among the plurality of sampling rates for the pixels arranged along any given line parallel to the second axis.

26. (Original) The method of claim 25 wherein first and second sampling rates alternate per pixel for consecutive pixels in any line parallel to the second axis.

27. (Currently amended) ~~A computer-readable medium having processor-executable instructions, which when executed by a processor, perform a method~~ for calculating

values for pixels of an image having the pixels arranged in rows and columns parallel to first and second perpendicular axes, respectively, the method comprising:

calculating in anti-aliasing circuitry sample values for pixels of the image in accordance with first and second sampling rates, a sampling rate defined by the number of samples per pixel and at least one sample per pixel, each sample having a corresponding sample value calculated, the sampling rate remaining constant for consecutive pixels arranged along any one given line parallel to the first axis and varying between the first and second sampling rates for consecutive pixels arranged along any one given line parallel to the second axis;

calculating in the anti-aliasing circuitry a respective values for each pixels of the image from all the ~~respective~~-calculated sample values for the pixel, every sample per pixel having a corresponding sample value for the calculation; and

providing from the anti-aliasing circuit the calculated values to be used in generating as-graphics data for an anti-aliased ~~for the image to be displayed on a display device.~~

28. (Original) The method of claim 27 wherein the pixels of the image are arranged in rows parallel to the first axis and columns parallel to the second axis, and the first and second sampling rates alternate every row of pixels.

29. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel.

30. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, the two sample locations per pixel for the first sampling rate arranged within a pixel along a line forming an acute angle with respect to either the first or second axes.

31. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, the two samples per pixel for the first sampling rate arranged within a pixel substantially along and on opposite sides

of a line parallel to either the first or second axes that divides the pixel in two, the axis to which the line is parallel alternating per consecutive pixel arranged along a line parallel to the first axis.

32. (Original) The method of claim 31 wherein the two samples per pixel of the first sampling rate vary for every other consecutive pixel lying along a line parallel to the first axis between a given sampling pattern and another sampling pattern which is substantially the same pattern rotated 90 degrees.

33-97. (Cancelled)